Genetic Improvement Strategies

The best way to improve your performance is to improve your flock's genetics. Selecting the right rams and using young rams with good genetics are proven, winning strategies.

Using <u>improved</u> young rams

Advantages:

- The ram's genetic potential is already known;
- The genetic value of the flock may be rapidly increased (increase selection intensity and reduce interval between generations);
- These rams are valuable and easily marketed

Beware!!!

Young rams need to be managed very carefully.

- Limit the number of ewes to breed. For example, very young rams (8 to 10 months old) should only breed about ten adult ewes;
- Ensure that rams have an excellent body condition score (3,5 to 4) at the beginning of the breeding period;
- Evaluate body condition score of ram on a daily basis during the breeding period (it should never drop below 3);
- Never mix young rams with adult rams (at any time);
- Upon purchase, place rams in quarantine (42 days).

Do not ignore…

- Conformation;
- Reproductive organ health;
- Scrapie Resistance – this selection trait should come after conformation and genetic evaluation. Never select rams with a VRQ allele.

How to choose an evaluated ram… a ram that meets your objectives

- Choose a maternal/prolific breed to create replacement females;
- Choose a breed according to your target market (milk, light or heavy lambs)
- Choose a terminal breed if your target market is heavy lambs

Recommendations of a geneticist

« This approach consists of selecting and using one year old rams based on their indexes and/or their EPDs. For example, you could select the top 10% of ram lambs index tested (selection intensity) and then mate them at 10 to 12 months old in order to achieve 15-20 lambings per ram, and then sell them for commercial use or to another purebred breeder ».

Chesnais, 2002

Selection based on data

- Look at the pedigree in order to avoid consanguinity ("inbreeding") and bring in new blood;
- A maternal breed is selected using the Maternal selection index.
- A paternal breed is selected using the Growth selection index. However, the Terminal selection index is preferred if the animal has been evaluated for loin eye and back fat thickness.
- Unlike most EPD values, the EPD for back fat thickness should be negative or almost zero;
- Do not select a ram with the VRQ allele (very susceptible to Scrapie).

Conformation selection

Do not select rams exhibiting the following:

- Dental problems;
- Small capacity;
- Weak pasterns (sunken);
- Limb problems;
- Unsteady gait;
- Deformed or hunched back;
- Other minor defects;

- Terminal rams should have good bone and muscle structure;
- Evaluate the reproductive organs.